

## PMSTPCOL PEmails

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**From:** Govan, Tekia  
**Sent:** Wednesday, December 09, 2009 9:27 AM  
**To:** STPCOL  
**Subject:** FW: RAI Response  
**Attachments:** U7-C-STP-NRC-090210signed.pdf

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**From:** Tomkins, James [mailto:[jetomkins@STPEGS.COM](mailto:jetomkins@STPEGS.COM)]  
**Sent:** Thursday, November 19, 2009 4:21 PM  
**To:** Muniz, Adrian; Dyer, Linda; Wunder, George; Tonacci, Mark; Eudy, Michael; Plisco, Loren; Anand, Raj; Foster, Rocky; Joseph, Stacy; Govan, Tekia; Tai, Tom  
**Subject:** RAI Response

Attached a courtesy copy of letter number U7-C-STP-NRC-090210 which contains the response to Request for Additional Information letter number 229 pertaining to COLA Part 2, Tier 2, Sections 4.4, 6.3, and Chapter 15.

The official version of this correspondence was signed today and will be placed in today's mail. Please call me if you have any questions concerning this letter.

**Hearing Identifier:** SouthTexas34Public\_EX  
**Email Number:** 1898

**Mail Envelope Properties** (F5A4366DF596BF458646C9D433EA37D71E8467E792)

**Subject:** FW: RAI Response  
**Sent Date:** 12/9/2009 9:26:53 AM  
**Received Date:** 12/9/2009 9:26:55 AM  
**From:** Govan, Tekia

**Created By:** Tekia.Govan@nrc.gov

**Recipients:**  
"STPCOL" <STP.COL@nrc.gov>  
Tracking Status: None

**Post Office:** HQCLSTR01.nrc.gov

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MESSAGE	901	12/9/2009 9:26:55 AM
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**Options**  
**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

November 19, 2009  
U7-C-STP-NRC-090210

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

South Texas Project  
Units 3 and 4  
Docket Nos. 52-012 and 52-013  
Response to Request for Additional Information

Reference: Letter, Scott Head to the Document Control Desk, Response to Request for Additional Information, dated November 16, 2009 (U7-C-STP-NRC-090202)

Attached is a revised response to an NRC staff question included in Request for Additional Information (RAI) letter number 229 related to Combined License Application (COLA) Part 2, Tier 2, Sections 4.4, 6.3, 15.0, 15.1, 15.2, and 15.4. This response supersedes the response made in the referenced letter.

Attachment 1 addresses the response to the RAI question listed below:

RAI 04.04-2

The COLA changes provided in this response will be incorporated in the next routine revision of the COLA following NRC acceptance of the RAI response.

There are twelve commitments that are completed as part of this response and they are shown in Attachment 2.

If you have any questions regarding these responses, please contact me at (361) 972-7136, or Bill Mookhoek at (361) 972-7274.

STI 32578441

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 11/19/09



Scott Head  
Manager, Regulatory Affairs  
South Texas Project Units 3 & 4

jet

Attachments:

1. Question 04.04-2
2. Commitments

cc: w/o attachment except\*  
(paper copy)

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L. D. Blaylock  
CPS Energy

**RAI 04.04-2:****QUESTION:**

For the items listed below, the applicant has proposed to provide the required information as an amendment to the FSAR at least one year prior to fuel load. The method proposed by the applicant is not an acceptable resolution. For each of the following items, please provide a method of resolution that will allow the NRC staff to reach a safety conclusion on each issue:

FSAR Section 4.4.7.1 COL Information Item 4.2 (COM 4.4-1)  
FSAR Section 4.4.7.2 COL Information Item 4.3 (COM 4.4-2)  
FSAR Section 6.3.6.1 COL Information Item 6.6 (COM 6.3-1)  
FSAR Section 6.3.6.3 COL Information Item 6.7a (COM 6.3-3)  
FSAR Section 15.0.5.1 COL Information Item 15.1 (COM 15.0-1)  
FSAR Section 15.0.5.2 COL Information Item 15.2 (COM 15.0-2)  
FSAR Section 15.0.5.3 COL Information Item 15.3 (COM 15.0-3)  
FSAR Section 15.1.2.3.2.2 (COM 15.1-1)  
FSAR Section 15.2.1.3.1 (COM 15.2-1)  
FSAR Section 15.2.2.3.2.3 (COM 15.2-2)  
FSAR Section 15.4.11.1 COL Information Item 15.5 (COM 15.4-1)  
FSAR Section 15.4.11.2 COL Information Item 15.6 (COM 15.4-2)

**RESPONSE:**

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the required information for STP 3&4, as noted in this question, which are all dependent on the fuel design, is provided in various subsections of the DCD, as shown in Table 1, and no new information is required. For clarification, Revision 3 of the COLA will be revised as shown by the attached markups. Changes are shown with gray shading.

Table 1 STP 3&amp;4 COL Information Item References

STP 3&4 COL COM No.	COL Item Description	DCD Subsection
4.4-1	Power/Flow Operating Map	4.4.3.3.1
4.4-2	Thermal Limits	4.4.3.3.1
6.3-1	ECCS Performance Results	6.3.3
6.3-3	Limiting Break Results	6.3.3.7.3
15.0-1	Anticipated Operational Occurrences (AOO)	15.0.4.5
15.0-2	Operating Limits	15.0.4
15.0-3	Design Basis Accidents	15.1 through 15.8
15.1-1	Feedwater Controller Failure- Maximum Demand	15.1.2.3.2.2
15.2-1	Inadvertent Closure of One Turbine Control Valve	15.2.1.3.1
15.2-2	Generator Load Rejection with Failure of All Bypass Valves	15.2.2.3.2.3
15.4-1	Mislocated Fuel Bundle Accident	15.4.7.3
15.4-2	Misoriented Fuel Bundle Accident	15.4.8.3

COLA Rev. 3 Markups**4.4.7.1 Power/Flow Operating Map**

The following site-specific supplement addresses COL License Information Item 4.2.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, ~~the~~ specific power/flow operating map to be used at the plant is provided in subsection 4.4.3.3.1 and Figures 4.4-1 and 4.4-2 of the DCD. ~~will be prepared and provided as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This operating map will be used in the final fuel analysis for the initial core loading to determine the analysis domain. (COM 4.4-1)~~

**4.4.7.2 Thermal Limits**

The following site-specific supplement addresses COL License Information Item 4.3.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, ~~the~~ results of the analysis to determine the thermal limits are ~~will be~~ provided in subsection 4.4.3.3.1 of the DCD. ~~as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This analysis will reflect the final fuel design for the initial core loading. (COM 4.4-2)~~

**6.3.6.1 ECCS Performance Results**

The following site-specific supplement addresses COL License Information Item 6.6.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, ~~the~~ exposure-dependent MAPLHGR, peak cladding temperature, and oxidation fraction for the ~~each~~ initial core bundle design based on the limiting break size are ~~will be~~ provided in subsection 6.3.3 of the DCD. ~~as an amendment to the FSAR in accordance with 10 CFR 50.71(e) at least one year prior to fuel load. The analysis will reflect the final fuel design for the initial core loading. (COM 6.3-1)~~



### 6.3.6.3 Limiting Break Results

The following site-specific supplement addresses COL License Information Item 6.7a.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the analysis results for the limiting break for the each bundle design are will be provided in subsection 6.3.3.7.3 of the DCD. as an amendment to the FSAR in accordance with 10 CFR 50.71(e) at least one year prior to fuel load. The analysis will reflect the final fuel design for the initial core loading. (COM 6.3-3)

### 15.0.5.1 Anticipated Operational Occurrences (AOO)

The following site-specific supplement addresses COL License Information Item 15.1.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the analysis results of the events identified in Subsection 15.0.4.5 for initial core loading are will be prepared and provided in subsection 15.0.4.5 of the DCD. as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This analysis will reflect the final fuel design for the initial core loading. (COM 15.0-1)

### 15.0.5.2 Operating Limits

The following site-specific supplement addresses COL License Information Item 15.2.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the operating limits resulting from the analyses normally provided in this subsection are will be prepared and provided in subsection 15.0.4 of the DCD. as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This analysis will reflect the final fuel design for the initial core loading. (COM 15.0-2)

### 15.0.5.3 Design Basis Accidents

The following site-specific supplement addresses COL License Information Item 15.3.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the results of the design basis accidents associated with the initial core, including radiological consequences, are will be prepared and provided in subsections 15.1 through 15.8 of the DCD. as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This analysis will reflect the final fuel design for the initial core loading. (COM 15.0-3)

#### 15.1.2.3.2.2 Feedwater Controller Failure–Maximum Demand

The following site-specific supplement addresses the COL item in this section of the reference ABWR DCD.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the analysis for the initial core is will be prepared and provided in subsection 15.1.2.3.2.2 of the DCD. as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This analysis will reflect the final fuel design for the initial core loading. (COM 15.1-1)

#### 15.2.1.3.1 Inadvertent Closure of One Turbine Control Valve

The following site-specific supplement addresses the COL License Information Item in this section of the reference ABWR DCD.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the analysis for the initial core is will be provided in subsection 15.2.1.3.1 of the DCD. as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This analysis will reflect the final fuel design for the initial core loading. (COM 15.2-1)

### 15.2.2.3.2.3 Generator Load Rejection with Failure of All Bypass Valves

The following site-specific supplement addresses the COL License Information Item in this section of the reference ABWR DCD.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the analysis for the initial core is will be provided in subsection 15.2.2.3.2.3 of the DCD, as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This analysis will reflect the final fuel design for the initial core loading. (COM 15.2-2)

### 15.4.11.1 Mislocated Fuel Bundle Accident

The following site-specific supplement addresses COL License Information Item 15.5.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the analysis results of the fuel bundle mislocated event are will be prepared based on NRC approved methods and are provided in subsection 15.4.7.3 of the DCD, as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This analysis will reflect the final fuel design for the initial core loading. (COM 15.4-1)

### 15.4.11.2 Misoriented Fuel Bundle Accident

The following site-specific supplement addresses COL License Information Item 15.6.

No departures are being taken from the fuel design licensing basis that is described in the reference ABWR DCD, including the core loading map used for response analysis in Figure 4.3-1 and the basic control strategy in Table 4A-1. Consequently, the analysis results of the fuel bundle misoriented event are will be prepared based on NRC approved methods and are provided in subsection 15.4.8.3 of the DCD, as an amendment to the FSAR in accordance with 10 CFR 50.71(e), at least one year prior to fuel load. This analysis will reflect the final fuel desi

### Commitments

<b>Commitment</b>	<b>Commitment Summary</b>	<b>Milestone</b>	<b>Commitment Type</b>
COM 4.4-1	Power/Flow operating map for initial fuel load will be added to the FSAR	12 months prior to fuel load	Completed
COM 4.4-2	Thermal Limit Curves for initial fuel load will be added to the FSAR	12 months prior to fuel load	Completed
COM 6.3-1	Exposure dependent MAPLHGR, peak clad temperature, and oxidation fraction for initial fuel load will be provided as an FSAR update	12 months prior to fuel load	Completed
COM 6.3-3	Analysis for the limiting LOCA for initial core fuel bundle design	12 months prior to fuel load	Completed
COM 15.0-1	Anticipated operational occurrence analyses for initial core loading will be provided as an FSAR update	1 year prior to fuel load	Completed
COM 15.0-2	Operating limits will be provided for the initial core loading	1 year prior to fuel load	Completed
COM 15.0-3	Design basis accident analyses for initial core loading are provided as an FSAR update	1 year prior to fuel load	Completed
COM 15.1-1	Feedwater controller failure analysis is performed and provided as an FSAR update	1 year prior to fuel load	Completed
COM 15.2-1	Inadvertent Closure of Turbine Control Valve analysis is performed and updated in FSAR	1 year prior to fuel load	Completed
COM 15.2-2	Generator Load Rejection analysis is completed and provided as FSAR update	1 year prior to fuel load	Completed
COM 15.4-1	Analysis of a fuel bundle mislocation event based on initial fuel load will be performed and provided as an FSAR update	1 year prior to fuel load	Completed
COM 15.4-2	Analysis of a fuel bundle misorientation event based on initial fuel load is completed and provided as an FSAR update	1 year prior to fuel load	Completed

